CW: Parabola Reflections

Honors Geometry

Name:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Label the key features of a parabola on the following graphs and pictures.

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| Macintosh HD:Users:rmitrovich:Desktop:Screen Shot 2015-05-17 at 8.32.38 PM.png | Macintosh HD:Users:rmitrovich:Desktop:Screen Shot 2015-05-17 at 8.35.26 PM.png |
| Macintosh HD:private:var:folders:0g:48kypbrs68g036cg240tvm8m0000gn:T:TemporaryItems:IMG_5924.JPG | Macintosh HD:private:var:folders:0g:48kypbrs68g036cg240tvm8m0000gn:T:TemporaryItems:IMG_5928.JPG |
| Macintosh HD:Users:rmitrovich:Desktop:Screen Shot 2015-05-17 at 9.47.59 PM.png | Macintosh HD:Users:rmitrovich:Desktop:Screen Shot 2015-05-17 at 9.54.37 PM.png |

Reflection:

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| 1. Plot point A(1,2). Reflect the point over the y-axis. What are the coordinates of the new point? | 2. Plot the point X(-2,4). Reflect the point over the y-axis. What are the coordinates of the new point? |
| 3. Plot the point R(5,5). Reflect the point over the line x=1. What are the coordinates of the new point? | 4. Plot the point Y(-2,-1). Reflect the point over the line x=-4. What are the coordinates of the new point? |
| 5. Describe the process of reflecting a point: | |
| 6. Can you determine the rest of this parabola if you know the vertex is (-2,-3)? Complete the rest of the graph/ table if you can.  Macintosh HD:Users:rmitrovich:Desktop:Screen Shot 2015-05-17 at 10.11.27 PM.pngMacintosh HD:Users:rmitrovich:Desktop:Screen Shot 2015-05-17 at 9.44.16 PM.png | |

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| 7. Consider the parabola whose x=0, graph the line. If there is one point at (6,2), what other point lies on the parabola? | 8. Can you determine the vertex of the parabola in problem 7? Why or why not? |
| 9. Consider the parabola whose x=-1, graph the line. If there is one point at (3,-1), what other point lies on the parabola? | 10. Consider the parabola whose x=2, graph the line. If there is one point at (-3,3), what other point lies on the parabola? |
| 11. Describe the process of determining the points on a parabola if you know half of the parabola. | |
| 12. Sketch a picture of the following situation. Derek Rose is at the free throw line, he is 6ft. 3in. tall, the free throw line is 15ft. away from the hoop. The hoop is 10 feet above the ground. How could you put this situation in the coordinate plane? | |
| 13. Suppose Rose shoots his first free throw and it reaches a maximum height of 20 ft. Do you have enough information to determine if the ball will go in? | |
| 14. Suppose the axis of symmetry of his second shot is x=8. Do you have enough information to determine if the ball will go in? | |
| 15. Watch the video. What information do you need to know to determine if the shot will go in? | |
| 16. Use this space to work out the problem from the video: | |